WHAT IS CLAIMED IS:

1. An isolated nucleotide sequence encoding a MCK-10 protein.

2. A cDNA nucleotide sequence encoding a MCK-10 protein.

3. A cDNA nucleotide sequence encoding an alternatively spliced isoform of MCK-10.

4. A cDNA nucleotide sequence encoding a member of the MCK-10 family of proteins in which the nucleotide sequence encodes the amino acid sequence of FIG. 1 (SEQ. ID NO:), or which is capable of selectively hybridizing to the DNA sequence of FIG. 1 (SEQ. ID NO:).

5. A recombinant DNA vector containing a nucleotide sequence that encodes a MCK-10 protein.

6. A recombinant DNA vector containing a nucleotide sequence that encodes a MCK-10 fusion protein.

7. The recombinant DNA vector of Claim 5 in which the MCK-10 nucleotide sequence is operatively associated with a regulatory sequence that controls the MCK-10 gene expression in a host.

8. The recombinant DNA vector of Claim 6 in which the MCK-10 fusion protein nucleotide sequence is operatively associated with a regulatory sequence that controls the MCK-10 fusion protein gene expression in a host.

9. The DNA of Claim 2, 3, 4, 5, 6, 7 or 8 in which the nucleotide sequence is capable of hybridizing under standard conditions, or which would be capable of hybridizing under standard conditions but for the degeneracy of the genetic code to the DNA sequence of FIG. 1.

10. An engineered host cell that contains the recombinant DNA vector of Claims 5, 6, 7 or 8.

11. An engineered cell line that contains the recombinant DNA expression vector of Claim 7 and expresses MCK-10.

12. An engineered cell line that contains the recombinant DNA expression vector of Claim 8 and expresses MCK-10 fusion protein.

13. The engineered cell line of Claim 11 which expresses the MCK-10 on the surface of the cell.

14. The engineered cell line of Claim 12 that expresses the MCK-10 fusion protein on the surface of the cell.

15. A method for producing recombinant MCK-10, comprising:

(a) culturing a host cell transformed with the recombinant DNA expression vector of Claim 5 or 7 and which expresses the MCK-10; and

(b) recovering the MCK-10 gene product from the cell culture.

16. A method for producing recombinant MCK-10 fusion protein, comprising:

(a) culturing a host cell transformed with the recombinant DNA expression vector of Claim 6 or 8 and which expresses the MCK-10 fusion protein; and

(b) recovering the MCK-10 fusion protein from the cell culture.

17. An isolated recombinant MCK-10 receptor protein.

18. A fusion protein comprising MCK-10 linked to a heterologous protein or peptide sequence.

19. An oligonucleotide which encodes an antisense sequence complementary to the MCK-10 nucleotide sequence, and which inhibits translation of the MCK-10 gene in a cell.

20. The oligonucleotide of Claim 19 which is complementary to a nucleotide sequence encoding the amino terminal region of the MCK-10.

21. A monoclonal antibody which immunospecifically binds to an epitope of the MCK-10.

22. The monoclonal antibody of Claim 21 which competitively inhibits the binding of ligand to the MCK-10.

23. The monoclonal antibody of Claim 21 which is linked to a cytotoxic agent.

24. The monoclonal antibody of Claim 21 which is linked to a radioisotope.

25. A method for screening and identifying antagonists of MCK-10, comprising:

(a) contacting a cell line that expresses MCK-10 with a test compound; and

(b) determining whether the test compound inhibits the bind of MCK-10 ligand and the cellular effects of ligand binding on the cell line,

in which antagonists are identified as those compounds that inhibit both the binding and cellular effects of MCK-10 ligand binding on the cell line.

26. The method according to Claim 25 in which the cell line is a genetically engineered cell line.

27. The method according to Claim 25 in which the cell line endogenously expresses the MCK-10.

28. A method for screening and identifying antagonists of MCK-10 activity comprising:

(a) contacting MCK-10 protein with a random peptide library such that MCK-10 will recognize and bind to one or more peptide species within the library;

(b) isolating the MCK-10/peptide combination;

(c) determining the sequence of the peptide isolated in step c; and

(d) determining whether the test compound inhibits the biological activity of MCK-10.

29. The method according to Claim 28 in which the MCK-10 protein is genetically engineered.

30. A method of modulating the endogenous enzymatic activity of the tyrosine kinase MCK-10 receptor in a

mammal comprising administering to the mammal an effective amount of a ligand to the MCK-10 receptor protein to modulate the enzymatic activity.

31. The method of Claim 30 in which the enzymatic activity of the receptor protein is decreased.

32. A recombinant vector containing a nucleotide sequence that encodes a truncated MCK-10 which has dominant-negative activity which inhibits the biological activity MCK-10.

33. The recombinant vector of claim 32 in which the vector is a retrovirus vector.

34. An engineered cell line that contains the recombinant DNA vector of Claim 33 and expresses truncated MCK-10.

35. An engineered cell line that contains the recombinant vector of Claim 33 and produces infectious retrovirus particles expressing truncated MCK-10.

36. An isolated recombinant truncated MCK-10 receptor protein which has dominant-negative activity which inhibits the biological activity of MCK-10.

37. A method of modulating the biological activity of MCK-10 in a mammal comprising administrating to the mammal an effective amount of truncated MCK-10 receptor protein which inhibits the biological activity of MCK-10 activation.

38. An isolated nucleotide sequence encoding a CCK-2 protein.

39. A cDNA nucleotid s quence encoding a CCK-2 protein.

40. A cDNA nucleotide sequence encoding an alternatively spliced isoform of CCK-2.

41. A cDNA nucleotide sequence encoding a member of the CCK-2 family of proteins in which the nucleotide sequence encodes the amino acid sequence of FIG. 3 (SEQ. ID NO:), or which is capable of selectively hybridizing to the DNA sequence of FIG. 3 (SEQ. ID NO:).

42. A recombinant DNA vector containing a nucleotide sequence that encodes a CCK-2 protein.

43. A recombinant DNA vector containing a nucleotide sequence that encodes a CCK-2 fusion protein.

44. The recombinant DNA vector of Claim 42 in which the CCK-2 nucleotide sequence is operatively associated with a regulatory sequence that controls the CCK-2 gene expression in a host.

45. The recombinant DNA vector of Claim 43 in which the CCK-2 fusion protein nucleotide sequence is operatively associated with a regulatory sequence that controls the CCK-2 fusion protein gene expression in a host.

46. The DNA of Claim 39, 40, 41, 42, 43, 44 or 45 in which the nucleotide sequence is capable of hybridizing under standard conditions, or which would be capable of hybridizing under standard conditions but for the degeneracy of the genetic code to the DNA sequence of FIG. 3.

47. An engineer d host cell that contains the recombinant DNA vector of Claims 42, 43, 44 or 45.

48. An engineered cell line that contains the recombinant DNA expression vector of Claim 44 and expresses CCK-2.

49. An engineered cell line that contains the recombinant DNA expression vector of Claim 45 and expresses CCK-2 fusion protein.

50. The engineered cell line of Claim 48 which expresses the CCK-2 on the surface of the cell.

51. The engineered cell line of Claim 49 that expresses the CCK-2 fusion protein on the surface of the cell.

52. A method for producing recombinant CCK-2, comprising:

(a) culturing a host cell transformed with the recombinant DNA expression vector of Claim 42 or 44 and which expresses the CCK-2; and

(b) recovering the CCK-2 gene product from the cell culture.

53. A method for producing recombinant CCK-2 fusion protein, comprising:

(a) culturing a host cell transformed with the recombinant DNA expression vector of Claim 43 or 45 and which expresses the CCK-2 fusion protein; and

(b) recovering the CCK-2 fusion protein from the cell culture.

54. An isolated recombinant CCK-2 receptor prot in.

55. A fusion protein comprising CCK-2 linked to a heterologous protein or peptide sequence.

56. An oligonucleotide which encodes an antisense sequence complementary to the CCK-2 nucleotide sequence, and which inhibits translation of the CCK-2 gene in a cell.

57. The oligonucleotide of Claim 56 which is complementary to a nucleotide sequence encoding the amino terminal region of the CCK-2.

58. A monoclonal antibody which immunospecifically binds to an epitope of the CCK-2.

59. The monoclonal antibody of Claim 58 which competitively inhibits the binding of ligand to the MCK-10.

60. The monoclonal antibody of Claim 58 which is linked to a cytotoxic agent.

61. The monoclonal antibody of Claim 58 which is linked to a radioisotope.

62. A method for screening and identifying antagonists of CCK-2, comprising:

(a) contacting a cell line that expresses CCK-2 with a test compound; and

(b) determining whether the test compound inhibits the bind of CCK-2 ligand and the cellular effects of ligand binding on the cell line,

in which antagonists are identified as those compounds that inhibit both the binding and cellular effects of CCK-2 ligand binding on the cell line.

63. The method according to Claim 62 in which the cell line is a genetically engineered cell line.

64. The method according to Claim 62 in which the cell line endogenously expresses the CCK-2.

65. A method for screening and identifying antagonists of CCK-2 activity comprising:

(a) contacting CCK-2 protein with a random peptide library such that CCK-2 will recognize and bind to one or more peptide species within the library;

(b) isolating the CCK-2/peptide combination;

(c) determining the sequence of the peptide isolated in step c; and

(d) determining whether the test compound inhibits the biological activity of CCK-2.

66. The method according to Claim 65 in which the CCK-2 protein is genetically engineered.

67. A method of modulating the endogenous enzymatic activity of the tyrosine kinase CCK-2 receptor in a mammal comprising administering to the mammal an effective amount of a ligand to the CCK-2 receptor protein to modulate the enzymatic activity.

68. The method of Claim 67 in which the enzymatic activity of the receptor protein is decreased.

69. A recombinant vector containing a nucleotide sequence that encodes a truncated CCK-2 which has dominant-negative activity which inhibits the biological activity CCK-2.

70. The recombinant vector of Claim 69 in which the vector is a retrovirus vector.

71. An engineered cell line that contains the recombinant DNA vector of Claim 70 and expresses truncated CCK-2.

72. An engineered cell line that contains the recombinant vector of Claim 70 and produces infectious retrovirus particles expressing truncated CCK-2.

73. An isolated recombinant truncated CCK-2 receptor protein which has dominant-negative activity which inhibits the biological activity of CCK-2.

74. A method of modulating the biological activity of CCK-2 in a mammal comprising administrating to the mammal an effective amount of truncated CCK-2 receptor protein which inhibits the biological activity of CCK-2 activation.

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